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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,276	03/31/2004	Hung-Ming Chien	58268.00354	5432
32294	7590	11/25/2005	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P.			MIS, DAVID C	
14TH FLOOR			ART UNIT	
8000 TOWERS CRESCENT			PAPER NUMBER	
TYSONS CORNER, VA 22182			2817	

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,276

Applicant(s)

CHIEN, HUNG-MING

Examiner

David Mis

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1028</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-11, 13-14 and 16-22 are again rejected under 35 U.S.C. 102(b.) as being clearly anticipated by Sonntag.

Sonntag disclosed an oscillator (column 3, lines 20-25) comprising 3 phase shift circuits (Fig. 1, "11") each having a pole (Fig. 6, "25, 26, 30, 31") connected in a loop (**column 3, lines 20-25**, the "11" – "11" – "11" – "12" loop, **Sonntag said "The delay line may be adapted to operate as a voltage controlled variable frequency ring oscillator ..."** where a **"ring oscillator"** uses switching from stage to stage to turn the next stage off and on. **If at first, the first stage "11" was sent IN+ = 1 and IN- = 0, then its outputs switched to OUTP = 1 and OUTN = 0, and so the second stage "11" was sent IN+ = 1 and IN- = 0 and produced OUTP=1 and OUTN=0, and so the third stage "11" was sent IN+ = 1 and IN- = 0 and produced OUTP=1 and OUTN=0, and**

so the deskewer "12" was sent $IN\ P = 1$ and $IN\ N = 0$ and produced $+OUT=1$ and $-OUT=0$, and Sonntag said "... ring oscillator by feeding back to the inputs $IN+$, $IN-$, preferably , a selected output pair of the taps of correctors 12 with the proper phase to insure oscillation at the desired frequency." and thus $+OUT$ and $-OUT$ **MUST have been cross coupled to the first stage $IN+$ and $IN-$ **OR ELSE** feeding back would not have been the proper phase to insure oscillation. One of ordinary skill in the art was well versed in feeding back delay line outputs to make ring oscillators. Sonntag did not need to elaborate more than he did. Sonntag said enough to explain the transformation of a delay line to an oscillator having a selected frequency, and expected that one hook the last stage output to the first stage input via the deskewer 12 and so that the first stage would be switched as required. The output of the last stage of the Sonntag ring oscillator was deskewed and cross-coupled to the first stage. This is only elementary deduction. It was a necessary connection.) wherein at least one of the poles includes a varactor ("25, 26, 30, 31") to generate phase shift accordingly (column 4, lines 11-30); ... 1/3 of a cross-coupled phase shift ... (Fig. 1 and Fig. 6); ... n-channel ... ("25, 30"); ... **varactor comprises a capacitance ... self****

evident; ... pole comprises a resistance ... (resistance exists in all circuit elements); ... diode ... (Fig. 4, "41"); ... feedback ... (Title).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-22 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Sonntag in view of Manna et al.

Sonntag disclosed that said above.

Sonntag did not disclose n-well MOSFETs. Manna et al disclosed a ring oscillator having varactor poles constructed using n-wells (column 6, lines 63-65, Fig. 3 "220"). How the circuitry was constructed in the oscillator

depended on what type of implementation the parent circuit to the ring oscillator used, and one of ordinary skill in the art had to use various types of implementations to configure the Sonntag teachings. It would have been obvious to one of ordinary skill in the art to have configured a Sonntag type ring oscillator with n-well teachings "motivated" to fit an n-well implementation as disclosed by Manna et al.

6. Applicant asserted that the rejection of claims 1-3, 5-11, 13, 14 and 16-22 were improper as not having been an obvious rejection because of Applicant's "cross-coupled" language ("REMARKS" page 4, middle paragraph). All of the claims 1-3, 5-11, 13, 14 and 16-22 do not include the "cross-coupled" language and so Applicant's assertion is too broad.

7. Applicant asserted ("REMARKS" page 5, middle paragraph) that the rejection in view of Nanna et al improper because it depended on a rejection based on Sonntag that Applicant deemed improper. Applicant's assertion is flawed in that the rejection based on Sonntag was not improper.

8. Applicant may incorporate "directly connected" language with respect to the final and first delay stage to overcome the Sonntag reference because Sonntag does not disclose an embodiment not having the deskewer.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Mis whose telephone number is (571) 272-1765. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Mis
Primary Examiner
Art Unit 2817